

Name _____

Keystone Warm-ups Ecology Unit

Copy down all 4 answer choices for the daily warm-up from the board in the space below its question. Choose the best answer by circling its letter. Then, after we go over it, write the correct answer in the block provided on the front of the packet.

1	<div></div>	2	<div></div>	3	<div></div>	4	<div></div>	5	<div></div>
6	<div></div>	7	<div></div>	8	<div></div>	9	<div></div>	10	<div></div>
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1. A serious threat to biodiversity is

- (A) habitat destruction
- (B) maintenance of food chains
- (C) competition within a species
- (D) a stable population size

2. A student recorded the following observations in a field notebook:

- Two grey wolves
- Five moose
- Several species of conifer trees
- Large granite rock
- Shallow pond

Which term best classifies all of the student's observations?

- (A) population
- (B) food chain
- (C) ecosystem
- (D) community

3. A researcher observing an ecosystem describes the amount of sunlight, precipitation, and type of soil present. Which factors is the researcher most likely describing?

- (A) biotic factors in a forest
- (B) biotic factors in a tundra
- (C) abiotic factors in a prairie
- (D) abiotic factors in an ocean

4. Which factor has the greatest influence on the type of ecosystem that will form in a particular geographic area?

- (A) genetic variations in the animals
- (B) climate conditions
- (C) number of carnivores
- (D) percentage of nitrogen gas in the atmosphere

5. Which organism carries out autotrophic nutrition?

- (A) hawk
- (B) cricket
- (C) grass
- (D) deer

6. Why is a mushroom considered a heterotroph?

- (A) It manufactures its own food.
- (B) It divides by mitosis.
- (C) It transforms light energy into chemical energy.
- (D) It obtains nutrients from its environment.

7. A food chain is represented below.

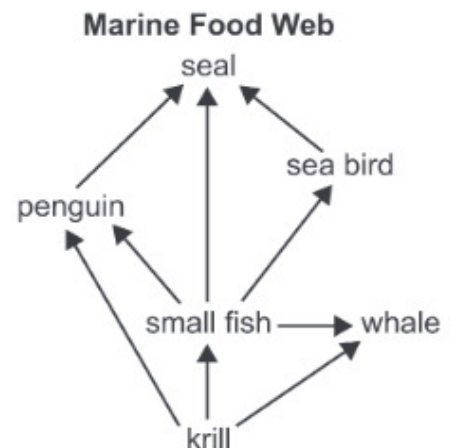
Grass → Cricket → Frog → Owl

This food chain contains

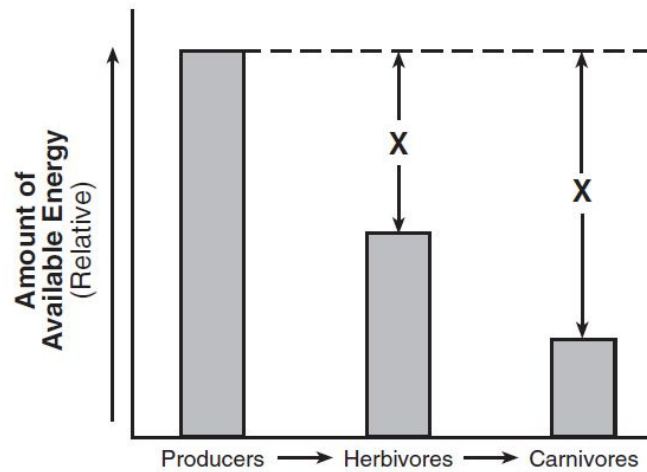
- (A) 4 consumers and no producers
- (B) 1 predator, 1 parasite, and 2 producers
- (C) 2 carnivores and 2 herbivores
- (D) 2 predators, 1 herbivore, and 1 producer

8. Which sequence correctly describes the flow of energy between organisms in the marine food web shown in the following diagram?

- (A) from seals to penguins to krill
- (B) from whales to krill to small fish
- (C) from sea birds to seals to penguins
- (D) from small fish to penguins to seals



9. The graph below represents the amount of available energy at successive nutrition levels in a particular food web.



The Xs in the diagram represent the amount of energy that was most likely

- (A) changed into inorganic compounds
- (B) retained indefinitely by the herbivores
- (C) recycled back to the producers
- (D) lost as heat to the environment

10. Which statement correctly describes how nitrogen in the soil returns to the atmosphere?

- (A) Soil bacteria convert nitrates into nitrogen gas.
- (B) Decomposers directly convert ammonium into nitrogen gas.
- (C) Plants assimilate the nitrites and convert them into nitrogen gas.
- (D) Nitrogen-fixing bacteria in plant roots convert nitrates into nitrogen gas.

11. Agricultural runoff can carry fertilizers into lakes and streams. This runoff can cause algae populations to greatly increase. Which effect does this change in the algae population sizes most likely have on affected lakes and streams?

- (A) an increase in water level
- (B) an increase in water clarity
- (C) a reduction in dissolved oxygen needed by fish and shellfish
- (D) a reduction in temperature variations near the water's surface

12. Information concerning nests built in the same tree by two different bird species over a ten-year period is shown in the table below.

Distance of Nest Above Ground (m)	Total Number of Nests Built by Two Different Species	
	A	B
less than 1	5	0
1–5	10	0
6–10	5	0
over 10	0	20

What inference best describes these two bird species?

- (A) They most likely do not compete for nesting sites because they occupy different niches.
- (B) They do not compete for nesting sites because they have the same reproductive behavior.
- (C) They compete for nesting sites because they build the same type of nest.
- (D) They compete for nesting sites because they nest in the same tree at the same time.

13. A species of snapping turtles has a tongue that resembles a worm. The tongue is used to attract small fish. Which best describes the interaction between the fish and the snapping turtle?

(A) predation

(B) mutualism

(C) parasitism

(D) competition

14. A volcanic eruption destroyed a forest, covering the soil with volcanic ash. For many years, only small plants could grow. Slowly, soil formed in which shrubs and trees could grow. These changes are an example of

(A) manipulation of genes

(B) evolution of a species

(C) ecological succession

(D) equilibrium

15. A manatee is a water-dwelling herbivore on the list of endangered species. If manatees were to become extinct, what would be the most likely result in the areas where they had lived?

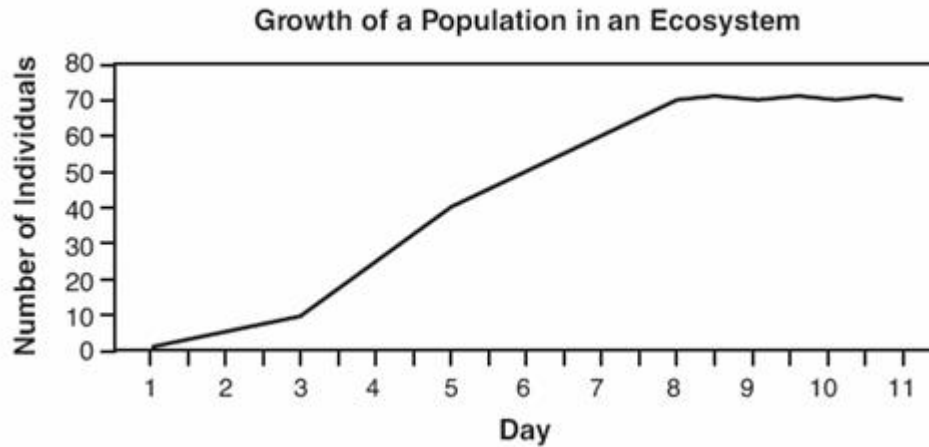
(A) The biodiversity of these areas would not be affected.

(B) Certain producer organisms would become more abundant in these areas.

(C) Other manatees would move into these areas and restore the population.

(D) Predators in these areas would occupy higher levels on the energy pyramid.

16. On which day did the population represented in the graph below reach the carrying capacity of the ecosystem?



(A) day 11

(B) day 8

(C) day 3

(D) day 5

17. A limiting factor unique to a field planted with corn year after year is most likely

(A) temperature

(B) sunlight

(C) water

(D) soil nutrients

18. Scientists observed that when two closely related species of predatory birds live in different areas, they seek prey early in the morning. However, when their territories overlap, one species hunts at night and the other hunts in the morning. When these two species live in the same area, they apparently modify their

(A) habitat

(B) niche

(C) ecosystem

(D) biodiversity